

LArSoft minutes, 14-Mar-2012. -- Eric Church

LArSoft minutes appear at <https://cdcvs.fnal.gov/redmine/projects/activity/larsoftsvn>. (The location presumably at which you found these!) For further details of matters reported here drill down into the wiki, etc, at that redmine site. Everyone is welcome to attend the bi-weekly meetings. Next meeting will be 28-Mar-2012 (there's a uBooNE review on our putative next date of 29-Feb). It will be back in the Racetrack, 7X0.

There are pdfs from Andrzej and Herb on the Documents link on redmine today.

Andrzej finished his discussion of various bugs solved. He reports that a Geant4 tracking feature/bug is now fixed in which EM shower daughters sometimes are tracked for hours, because the G4 step size is erroneously set to ridiculously small value, like $1e-16$ cm. Andrzej and Bill Seligman have inserted a workaround. New versions of G4 are reported to solve this. Andrzej also reports a new end-point-determination tool in the EVD. Click on your favorite point in 2 planes, EVD shows the 3rd! Last, Andrzej showed the results of working with Eric and Brian to fix the SingleGen bug that only recently showed its head in the mode in which one wants to draw from N possible particles, not just 1, each conforming to its own momentum and space distributions. There were vectors not properly sized. See Andrzej's slides for details on how to run, and the fix.

Herb placed "3D Kalman Track Fit Using Space Points and Hits" on the redmine Documents page. There's also a document there about the proposed toolkit to do this. Herb has outlined the classes needed, and gave a summary about the functionality. Interested parties are urged to join the new tracking group organized by Mike Kirby and chip in.

A conversation ensued at the end of the discussion. SpacePoints are 3D hits and are currently used to hold information from the 2D hits that comprise them and their associated errors. Spacepoints are not currently written as part of the event. They are owned by Prongs. So to save them on the Event now we create Prongs and attach them to those. Among Herb's new objects will emerge a RecoBase object -- TrackPoints? -- which will hold the Kalman State and covariance matrix at relevant points along the track. SpacePoints will continue to be used as currently, and all code will be backward compatible.

See ya next time. -- Eric

Details for the next meeting:

>>> video: 85LARSW

>>> phone: 510 423 9220 (ID 85LARSW)

>>> fnal location: Racetrack, 7th floor x-over